

A NEW VARIETY OF *PHANERA GLAUCA* SUBSP. *TENUIFLORA*
(FABACEAE: CAESALPINIOIDEAE) FROM INDIA

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ABSTRACT

Phanera glauca subsp. *tenuiflora* var. *gandhiana*, var. nov. (Fabaceae: Caesalpinioideae) is described from Arunachal Pradesh, India.

RESUMEN

Se describe *Phanera glauca* subsp. *tenuiflora* var. *gandhiana*, var. nov. (Fabaceae: Caesalpinioideae) de Arunachal Pradesh, India.

Some collections from Anjaw district, Arunachal Pradesh, identified to be of *Bauhinia glauca* (Benth.) Wall. ex Benth. subsp. *tenuiflora* (Watt ex C.B. Clarke) K. Larsen & S.S. Larsen, were seen at ARUN. The collections definitely belong to ser. *Corymbosae* in *Bauhinia* subgen. *Phanera* sect. *Phanera* subsect. *Fulvae* (Wunderlin et al. 1987), but the identification was not correct. These collections have been described here to be of a new variety of *Phanera glauca* Benth. subsp. *tenuiflora* (Watt ex C.B. Clarke) A. Schmitz because recent phylogenetic studies based on DNA sequence data (Lewis & Forest 2005; Sinou et al. 2009) suggest that *Bauhinia* L. subgen. *Phanera* (Wunderlin et al. 1987) should be recognized as a genus distinct from *Bauhinia*.

***Phanera glauca* Benth. subsp. *tenuiflora* (Watt ex C.B. Clarke) A. Schmitz var. *gandhiana* Gogoi & Bandyop., var. nov. (Figs. 1, 2 & 3).** TYPE: INDIA. ARUNACHAL PRADESH: Anjaw district, in between Changwanti and Walong, 800 m, 20 May 2011, R. Gogoi 24374 (HOLOTYPE: CAL 0000025065; ISOTYPES: ARUN, ASSAM).

Differs from *Phanera glauca* Benth. subsp. *tenuiflora* (Watt ex C.B. Clarke) A. Schmitz in having fusiform flower buds and hypanthium shorter than their respective pedicels. In subsp. *tenuiflora* the flower buds are ovoid and hypanthium longer than their respective pedicels.

Lianas with tendrils, ca. 8 m in height; hairs ferruginous when dry; tendrils flattened, pubescent. Leaves 4.7–10 × 3–9 cm, ovate or ovate-orbicular, 7–9-nerved, retuse to tapering or bifid to 1/3 their length into broadly obtuse lobes at apex, truncate or shallowly cordate at base, glabrous above, pubescent beneath, particularly on the nerves, later glabrescent excepting the nerves; petioles 0.9–1.9 cm long, pubescent to glabrescent. Stipules 5–9 × 1 mm, linear-oblong, pubescent outside. Racemes corymbose, axillary or terminal, pubescent. Flower buds 7–7.5 × 3 mm, fusiform, slightly curved at apex, pubescent. Hypanthium ca. 7 mm long, tubular, faintly striate in dried specimens, pubescent. Pedicels 3–3.6 cm long, slender, pubescent. Bracts 8–9 mm long, linear-oblong, pubescent; bracteoles 8–9 mm long, filiform, situated near the middle of pedicel. Flowers ca. 1.8 cm across. Calyx 2–3-lobed. Petals 1–1.1 × 0.4–0.5 cm, white, narrowly to broadly obovate, obtuse at apex, veined, glabrous inside, glabrescent outside, particularly in the median zone; claw ca. 3 mm long, glabrescent outside. Fertile stamens 3; filaments 7–9 mm long, white, glabrous; anthers 2.5–3 mm long, purplish, ellipsoid. Reduced stamens 5, ca. 2.5 mm long, with rudimentary anther at tip, swollen and connate at base; bases bright yellow. Staminodes 2, in between stamens. Gynophore ca. 2 mm long, sparsely pubescent; ovary ca. 5 mm long, greenish white, sparsely pubescent on the sutures at base; style 3 mm long, greenish white, glabrous; stigma ca. 1.5 mm across, green, obliquely peltate. Pod unknown.

Distribution and ecology.—India (Arunachal Pradesh, Anjaw district), common at the place of collection in tropical evergreen forest at an elevation of 800 m. Anjaw district is a newly created district, having been split from Lohit district in 2004.

Flowering.—May.

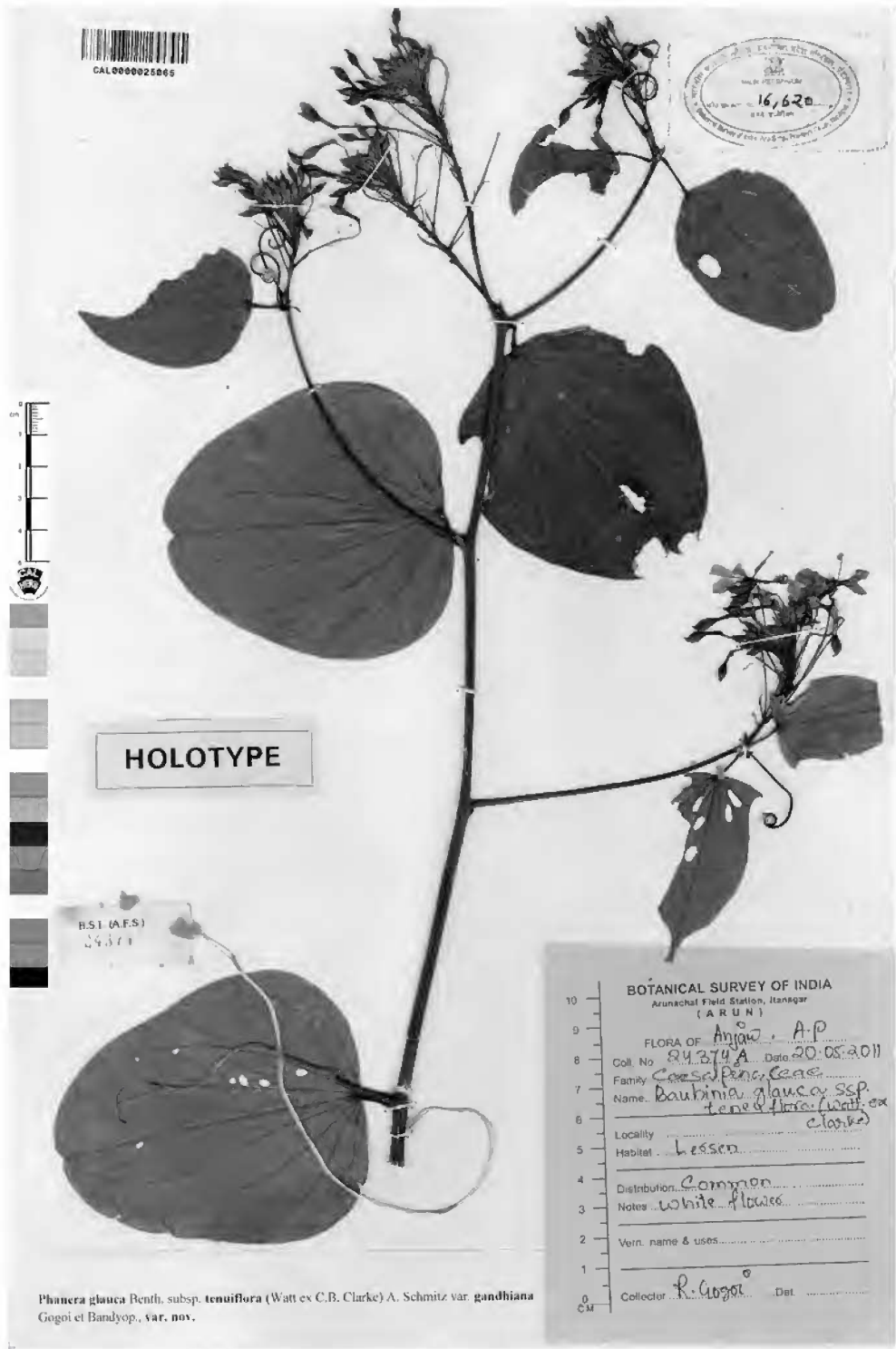


Fig. 1. Holotype of *Phanera glauca* subsp. *tenuiflora* var. *gandhiana*.



Fig. 2. *Phanera glauca* subsp. *tenuiflora* var. *gandhiana* in flower (Photo: Rajib Gogoi).

Etymology.—The variety has been named to honor Dr. K.N. Gandhi for his valuable contribution in the field of plant nomenclature.

Chen et al. (2010) while working on the Chinese *Bauhinia* treated *Bauhinia caterviflora* H.Y. Chen, *B. hupehana* Craib including var. *grandis* Craib and *B. pernervosa* H.Y. Chen as synonyms of '*Bauhinia glauca* var. *tenuiflora* (Watt ex C.B. Clarke) K. Larsen & S.S. Larsen' which were by that time were considered as subspecies or varieties of *Bauhinia glauca*. We are accepting here only two subspecies viz. subsp. *glauca* and subsp. *tenuiflora* under *P. glauca* but at the same time do not agree with the taxonomic treatment of *B. hupehana* including var. *grandis*. Chen et al. (2010) in the key characters of subsp. *tenuiflora* stated that the hypanthium in subsp. *tenuiflora* is 2.5–3 cm in length and longer than their respective pedicels. This is, however, not correct because we have examined the type of *B. hupehana* (China, W. Hupeh, May 1907, E.H. Wilson 3373 K 000760713 image!) in which of the length of the hypanthium is 1.3–1.6 cm and they are shorter than the their respective pedicels whereas in subsp. *tenuiflora* the hypanthium is longer than the respective pedicels. In the type of *B. hupehana* Craib var. *grandis* (China, Western Szechuan, Tung Valley, near Mt. Wa, 500–1000 m, June 1908 & October 1908, E.H. Wilson 3372 K 000760712 image!) the length of the hypanthium is 1.5–1.8 cm. The leaves in both these collections are ca. $\frac{1}{3}$ bifid at apex whereas in subsp. *tenuiflora* the leaves are $\frac{1}{9}$ – $\frac{1}{5}$ bifid at apex. Thus we feel that *B. hupehana* including var. *grandis* from Hupeh, Hunan and Szechuan most probably deserves to be accepted as a variety of subsp. *tenuiflora*. Both these type specimens though annotated by Supee S. Larsen as *Bauhinia glauca* (Wall ex Benth.) Benth. var. *tenuiflora* (Watt ex C.B. Clarke) K. & S.S. Larsen in 1978, the identity was not clear to Supee S. Larsen at that time because in a later publication (Larsen & Larsen 1984) they



FIG. 3. *Phanera glauca* subsp. *tenuiflora* var. *gandhiana* in flower (Photo: Rajib Gogoi).

TABLE 1. Comparative account of some morphological features between *P. glauca* subsp. *glauca*, *P. glauca* subsp. *tenuiflora* and *P. glauca* subsp. *tenuiflora* var. *gandhiana*

Characters	<i>Phanera glauca</i> subsp. <i>glauca</i>	<i>Phanera glauca</i> subsp. <i>tenuiflora</i>	<i>Phanera glauca</i> subsp. <i>tenuiflora</i> var. <i>gandhiana</i>
Leaf	1/3–1/2 (–3/4) bifid at apex	1/3–1/2 bifid at apex	Leaves retuse to tapering or bifid to 1/3 their length at apex
Inflorescence	Short dense corymbs	Elongate corymbs	Almost like subsp. <i>tenuiflora</i>
Flower bud	Ovoid; glabrous or with some pubescence at top	Ovoid; pubescent	Fusiform; pubescent
Hypanthium	1–1.5 cm in length, shorter than their respective pedicels, glabrous or sparsely pubescent	2.5–3.2 cm in length, longer than their respective pedicels, pubescent	ca. 7 mm in length, shorter than their respective pedicels, pubescent

stated that *B. hupehana* is very close to subsp. *tenuiflora* and further studies on Chinese material are necessary before reaching a final decision on the taxonomic status of *B. hupehana*.

A comparative account of some morphological features between *P. glauca* subsp. *glauca*, *P. glauca* subsp. *tenuiflora* and *P. glauca* subsp. *tenuiflora* var. *gandhiana* are given in Table 1.

There has been no collection of *P. glauca* subsp. *glauca* from the Indian region (Bandyopadhyay 2001) and so we have preferred to describe this variety to be of subsp. *tenuiflora* which is found in N.E. India.

ACKNOWLEDGMENTS

We thank Paramjit Singh, Director, Botanical Survey of India, P. Satyanarayana, Scientist 'D' & HOO, APRC, BSI and A.A. Mao, Scientist 'E' & HOO, ERC, BSI for the facilities. We also thank R.P. Wunderlin and an anonymous reviewer for their suggestions.

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